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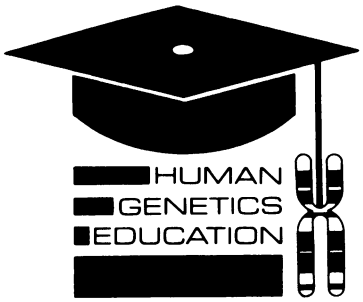

Historiography of Eugenics

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Garver and Garver's (1991) article on the eugenics movement was a well-lit stroll down a dark intellectual passageway. The lesson of eugenics should be evident to all: problems of human biology are rewarding, but they cannot be addressed as dispassionately as can the biology of other organisms, because social values inhere in any scientific study of human groups that do not inhere in the scientific study of other organisms.

The eugenics movement was multifaceted, but it centered on the interpretation of cultural history in fundamentally biologic terms. The achievements of a society, in this view, were considered to be a simple outgrowth of the constitutional endowments of its people. In other words, history (past or future) was bound in some basic way to genetics: people of a culture that could smelt iron were constitutionally superior to those of a culture that could only chip and polish stones, at the very least because the ability to innovate (i.e., "intelligence") was an intellectual property rooted in the genome. Since technological change (a social property) was thought to be determined by the ability to innovate (an individual property), and since innovative people were certainly smarter than noninnovative people, it readily followed that cultural "progress" was driven principally by the birthrate of geniuses, regardless of any other social processes. When considered in reverse, this train of thought implied that more "advanced" cultures were populated by smarter organisms.

The logic applied as easily across different social strata in the same culture as it applied across different cultures. Here, however, the well-documented differential reproduction of the lower classes posed an immediate threat to the nation. The ancestry of the lower classes was generally traceable to culturally "backward" lands, which served to identify them as genetically stupid; but exceptions, such as the prolific shiftless branch of the (Anglo-Saxon) "Kallikak" family, nevertheless reinforced the same insecurities. If these people were permitted to reproduce unchecked, they would soon swamp the (smart) upper classes and lead the country straight to ruin.

That such absurdly simpleminded ideas could have become popular—indeed, could have been seen as the modern, scientific view of things—is probably a combined result of hereditarian social values, the success of Mendelism in biology, and the infancy of the social sciences. An important point that cannot be overemphasized, however, is the extent to which eugenics was actually a mainstream movement among professional biologists and geneticists. The fact is that virtually every textbook on heredity written between 1910 and 1930 advocates eugenics. It is all but impossible to find a biologist or geneticist expressing, in print, opposition to the field, until the mid-to-late 1920s (Allen 1975). Since this involves acknowledging some embarrassing intellectual history, there is often an element of revisionism that accompanies reflective accounts of the field.

This revisionism takes three common forms. The first is to pretend that the movement never happened and to ignore eugenics completely, as did L. C. Dunn in his *A Short History of Genetics* (Dunn 1965). Yet Dunn's work itself encapsulates the history of the movement. The first edition of his widely used *Principles of Genetics* (Sinnott and Dunn 1925) brings the overview of heredity to its pedagogical climax with a fairly typical concluding chapter on eugenics, discussing (but not criticizing) the usual topics: Mendelian "feeblemindedness" as the cause of social problems; the desirability of restricting immigration on the basis of the germ plasm of the immigrants; increasing the birthrate of the "better" (i.e., economically successful) humans; and sterilization of the poor. In their own words:

> Finally, the paupers, ne'er-do-wells, tramps, beggars, and others who are unable or unwilling to support themselves and must depend, for part of the time at least, on

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> institutional aid, are more numerous than is often thought and undoubtedly owe their low estate in many cases to defective inheritance. Improved economic and social conditions would doubtless reduce the numbers of this group by removing from it those who are victims of circumstance or lack of opportunity, but it is to be feared that even under the most favorable surroundings there would still be a great many individuals who are always on the border line of self-supporting existence and whose contribution to society is so small that the elimination of their stock would be beneficial [Sinnott and Dunn 1925, p. 406].

In the second edition (Sinnott and Dunn 1932), by which time the stock market had crashed and it was apparent that natural hereditary aptitudes—whatever they might be—were not reliable determinants of the distribution of wealth and power, that chapter had vanished. There is but a single mention of the word "eugenics," although the reason given for deleting the chapter is simply that "many good books are available" in the area (Sinnott and Dunn 1932, p. ix). In the third edition (Sinnott and Dunn 1939), the single paragraph mentioning eugenics carries over, but the word "eugenics" no longer appears in the index. And, in the fourth edition (Sinnott et al. 1950), eugenics is just a distant memory.

Yet, by the time Dunn actually wrote the history of the field (by which time he had written extensively opposing racist biology), eugenics was apparently no longer even a memory. Obviously it is difficult to imagine how we can learn from the mistakes of the past if we forget or ignore them.

A second form of revisionism involves pushing eugenics to the margins, by rewriting it as a fringe movement populated by a few zealots and pseudoscientists. Thus, Sturtevant, in his *A History of Genetics:* "If one is inclined to look upon individual mental differences as largely genetic in origin, he then is likely to consider the observed (or imagined) cultural differences between races as being genetically determined and to conclude that some races (including the one to which he belongs) are inherently superior. The extreme examples of this attitude have not usually been scientifically trained. . . . There have, however, been biologists with some background in genetics who have leaned in this direction" (Sturtevant 1965, pp. 130–131).

The implication of this last considerable understatement is that the scientists themselves had little to do with it—that the pseudoscientists and the abusers were a category of people largely different from the scientists in the eugenics movement. The picture is one of chaste, objective scientific work that has been abused, most extremely by the Nazis. But, in view of the fact that eugenics was a scientific movement—a movement originating within and validated by the genetics community—what would qualify it as either a *pseudo*science or an *abused* science?

In retrospect, most ideas that most scientists have ever had have been wrong. That eugenics was wrong is therefore hardly a legitimate reason for regarding it as a pseudoscience, akin to creationism or astrology. Indeed, since virtually every contemporary book on human heredity discussed eugenics favorably, it would seem strikingly inappropriate to characterize eugenics in the 1920s as pseudoscience. If the great majority of specialists in the field hold those views, then they constitute, *by that very fact,* not pseudoscience, but science itself. Further, is it proper to regard eugenics as an abused science when the abusers were the scientists? The Nazis, after all, did not have to invent the idea of sterilizing or exterminating undesirables—they merely appropriated it from the science of eugenics (see Kevles 1985; Gould 1992).

To be against eugenics in the 1920s was to be perceived as being against modernity, progress, and science. The ideas were inaccurate and insensitive—but they were modern science as it was constituted in that decade.

The third form of revisionism is simply to downplay the appeal of the movement and its ideas to the community of American geneticists. There is an undercurrent of this in the historical review by Garver and Garver (1991). For example, recounting that H. S. Jennings received little attention during the 1924 congressional hearings on immigration, they describe him as "a strong opponent of the eugenics movement," who, "if given more time, . . . co[u]ld have discredited some of the earlier testimony" (Garver and Garver 1991, pp. 1110–1111) and could presumably have laid waste to the movement right then and there. That speculation, however, is difficult to reconcile with Ludmerer's (1969, p. 351; 1972, p. 81) statement that Jennings was offered the presidency of the American Eugenics Society 2 years later. While Jennings (1925), in his *Prometheus,* did challenge some of the strongest genetic-determinist claims, he did so *as a eugenicist,* not as an anti-eugenicist (Barkan 1992).

Indeed, to come to grips with the eugenics movement involves recognizing that every single member of the founding editorial board of the journal *Genetics* in 1916 was an advocate of the eugenics program (Ludmerer 1969, pp. 339–340; 1972, p. 25). In that same year, two cogent criticisms of eugenics were published

by leading anthropologists (Boas 1916; Kroeber 1916), who had struggled to effect a conceptual divorce between historical and genetic processes (e.g., see Boas 1911)—but it would be nearly a decade before such critiques would emerge from within the field of biology. Until the mid-1920s, the job of publicly debunking eugenics was entirely in the hands of social scientists and humanists, who themselves were far from united against it. But one can profitably contrast the reviews of Madison Grant's *The Passing of the Great Race* (1916), in *Science* (laudatory: Woods 1918; Allen 1975) and in *The American Journal of Physical Anthropology* (dismissive: Boas 1918), to gauge the depth of naïveté, on the part of scientists, as to the pernicious social values —and the simple foolishness—embedded in their conception of the "scientific" betterment of humanity (also see Woods 1923).

There is much to reflect on when the eugenics movement is considered as a part of American science. How do we tell science from pseudoscience? How do we recognize social values as they permeate our work? How do we know what part of today's stock of scientific knowledge will be shown to be wrong tomorrow? How can we convince the public that the "eugenic" motives of today's genetic screening programs are in fact different from the "eugenic" motives expressed by geneticists in the 1920s? And how do we balance our respect for civil liberties against a foresighted desire to curb the general proliferation of our species?

The answers are not immediately evident, but, by studying the mistakes of a previous generation, we can gain a little more wisdom by which to formulate the answers for our own generation. Were Jennings alive today, he might well consider reprinting some of the thoughts from his little book *Prometheus* and applying them to contemporary issues in molecular genetics: "Students of heredity, like other [people], are disposed to make the most of their achievements: to dwell upon what they know, what they can do, and what they can predict. They have, indeed, achieved much; the last twenty-five years have made greater advance in the knowledge of heredity than had all the ages before. But recognition of limitations is as valuable as other sorts of knowledge; realization of what we cannot do is as necessary for correct guidance as realization of what we can do" (Jennings 1925, pp. 25–26).

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